

To: Housing and Community Development Committee

From: Robert Griffin, Building Safety Director

Date: 17 September 2007

Subject: Expansion of the Secondary Fire District to match the CBD

I am requesting the Housing and Community Development Committee of City Council have an opportunity to review the Building Safety and Fire Department proposal to expand the secondary fire district to match the Central Business District. All other City Department Directors and the Downtown Commission have given their concurrence to the secondary fire district expansion. The IAAI, and other professional groups have either given their concurrence to the expansion or had a presentation on the concept. The following provides authorization from NC General Statutes, benefits, and potential downfalls.

Background:

North Carolina General Statute 160A-435 requires the City of Asheville to establish a primary fire district which must include the principal business portions of the city. In addition, the General Statute allows for the establishment of one or more separate areas within the city as secondary fire districts. The North Carolina Building Code specifies the scope and requirements of a fire district.

Currently the City of Asheville has established a primary fire district in the core downtown area (see map) and a secondary fire district generally confined in the area between Church Street, Buxton, Coxe, and Banks Avenues. Over the years, other secondary fire districts have been deleted due to no longer meeting the criteria established in the North Carolina Building Code for a fire district.

There is one primary difference between a primary and secondary fire district. In the primary fire district the Commissioner of Insurance or his designee must approve permits for any frame or wooden building or structure or addition that is erected, altered, repaired, or moved within the fire district. Additional approvals are necessary by the City Council. In the secondary fire district no approval from the Commissioner of Insurance is necessary, only approval by the City Council.

Recommendation:

The City of Asheville Building Safety and Fire Department reviewed the criteria for establishment of the primary and secondary fire districts. The Planning Department was consulted for reference to the UDO and potential

benefits or conflicts if the primary or secondary fire districts were altered. The scope of the Central Business District and the Secondary Fire District requirements are a match for integrating new uses into and with existing architecture while providing building mechanisms to assist public fire protection costs and maximize the potential benefits. Therefore, the Central Business District and secondary fire district being the same geographic area will allow for existing non-conforming buildings to be adapted for re-use and meet the intent of the Central Business District. The Asheville Fire Department and Building Safety recommend the secondary fire district be expanded to match the Central Business District. We believe this change matches the scope of a Fire District and the Central Business District. In addition, we believe it will make the area safer from fires that begin on the exterior and spread to the interior. The expansion also provides the urban area of the City with a construction type that prevents or greatly assists in the prevention of fire spreading from one building to another or a conflagration.

The recommendation for re-use or addition to a non-conforming building in the Secondary Fire District will be the addition of fire sprinklers for re-use (after vacancy for greater than 180 days) or to the additional area if enlarging without vacancy. It will be recommended to Council for renovation or remodel of a non-conforming building that an automatic fire alarm system be installed. In many cases, the addition of a sprinkler system for non-conforming and conforming buildings allows other building code trade-offs which allow greater uses and less protection of wood interior components.

The primary restriction in the Fire District prohibits Type V construction. Type V construction are buildings with exterior walls constructed of wood frame. Examples of Type V construction as permitted by Table 503 in the NC Building Code, without applying exceptions;

Residential	2 story	7,000 sq ft per floor
Office	2 story	9,000 sq ft per floor

Examples of Type V-A construction as permitted by Table 503 in the NC Building Code with one-hour fire rating applied to wood construction (walls, floor and roof) and fire sprinklers;

Residential	4 story	12,000 sq ft per floor (24,000 w/fire sprinklers)
Office	4 story	18,000 sq ft per floor (36,000 w/fire sprinklers)

Most existing downtown buildings are Type III, noncombustible exterior walls with combustible floors and/or roof. Most new downtown buildings are Type II, noncombustible exterior walls, floor and roof.

The International Code Council (North Carolina's Code) list average cost of construction per square foot. Examples of potential cost differences are as follows:

A Type V residential building with each living unit having 1,000 square feet the increase in cost per unit would be:

Residential	Type III vs. Type V = \$90.98 (Type III) - \$77.93 (Type V) = \$13.05 X 1000 sq ft = \$13,050
Residential	Type II vs. Type V = \$100.86 (Type II) - \$77.93 (Type V) = \$22.93 X 1000 sq ft = \$22,910

As an example, a Type V office building with each office area having 1,000 square feet the increase in cost per unit would be:

Office	Type III vs. Type V = \$108.89 (Type III) - \$94.08 (Type V) = \$14.81 X 1000 sq ft = \$14,810
Office	Type II vs. Type V = \$122.37 (Type II) - \$94.08 (Type V) = \$28.29 X 1000 sq ft = \$28,290

Affordable housing costs may be impacted in the Central Business District if the secondary fire district is expanded. Cost savings would be achieved with Type II or Type III construction due to the building not being required to have space between it and the next building or property line (as a Type V would require). In addition the building could be larger in height and square footage gaining in the economies of scale.

In research of the North Carolina Building Codes, we could not find major items for electrical, plumbing, or mechanical that would be allowed in a Type V that would be prohibited in a Type II or Type III. Some differences exist based on use, building height, etc. and for exceeding the 4-story maximum listed for a Type V construction.

Summary:

The NC General Statutes require a primary fire district and recommend a secondary fire district when urban conditions are met. The CBD and secondary fire district have similar scopes and objectives. Benefits to enlarging the secondary fire district include greater density, increased built-in fire protection with construction type, maximizing the use of existing non-conforming buildings while increasing life safety measures, and decreased potential for major fires. The area of concern is the potential negative consequence to affordable housing due to increased construction cost. However, I believe the additional construction cost is offset by the benefits found within the Building Code for larger buildings closer together and the increased fire resistance of new construction in the Central Business District. A Type V building loses 3-feet of property on all sides from the property line or additional fire resistive measures are added and both reduce the cost of the construction discrepancy.